MOTOROLA SOLUTIONS

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October 17, 2018

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: WRC-19 Recommendations
IB Docket No. 16-185

Dear Ms. Dortch:

Motorola Solutions, Inc. ("MSI") submits these comments in response to the Public Notice soliciting public input on recommendations approved by the Commission's World Radiocommunications Conference ("WRC") Advisory Committee ("WAC").[1] As further discussed below, MSI urges the Commission to reject the current draft proposal submitted by the National Telecommunications and Information Administration ("NTIA") addressing WRC-19 agenda item 1.3.[2]

Agenda Item 1.3 considers the possible upgrading of the secondary allocation of the meteorological-satellite service (space-to-Earth) to primary status and adding a possible primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460 – 470 MHz. According to NTIA's draft recommendation, studies have demonstrated that sharing is possible between meteorological-satellite (space-to-Earth)/earth-exploration-satellite (space-to-Earth) services and the incumbent services.[3] NTIA therefore recommends that the U.S. support the necessary modifications in the international regulations to elevate the allocation for the meteorological-satellite service in the 460 – 470 MHz band to primary and to add a new primary allocation for earth-exploration-satellite in the same band.

The current NTIA recommendation is a modification of a previous NTIA submission intended to achieve the same outcome in the 460-470 MHz band.[4] On April 10, 2018, MSI submitted comments on that earlier recommendation and requested modifications to strengthen NTIA's

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1 *International Bureau Seeks Comment on Recommendations Approved By World Radiocommunication Conference Advisory Committee,* Public Notice, IB Docket No. 16-185 (Oct. 3, 2018).

2 Document WAC/074, IB Docket No. 16-185 (filed September 25, 2018).

3 *Id.*

4 *Comment of Informal Working Group Three (IWG-3/046 NTIA/AA Coord. Letter on Agenda Items 1.1, 1.3, 1.7, 1.10, 1.15, and 7),* IB Docket No. 16-185 (filed Apr. 16, 2018), at 4-5 (NTIA/AA Coord. Letter).

proposed language defining the protection standards for incumbent primary services in the band.[5] The latest version of the NTIA recommendation does not address MSI's recommended modifications but, rather, simply removes NTIA's previous language that attempted to make clear that the newly primary satellite services would not be able to claim protection from incumbent services. As such, the current proposal dilutes incumbent interference rights over the previous version. For that reason, MSI urges the Commission to reject the recommendation.

The 460 – 470 MHz frequency band is allocated on a primary basis to the fixed and mobile services. In the U.S., the band is part of the dominant UHF allocation for fixed and mobile services and is used intensely by public safety, critical infrastructure, industrial and commercial entities. The nearly 130,000 active licenses currently reflected in the FCC's Universal Licensing System (ULS) database authorize the use of millions of fixed and mobile transmitters in the band. In addition, another 1,000 Federal assignments are also authorized in the band with "most used for land mobile systems for public safety interoperable communications between Federal, State and local public safety entities."[6] The NTIA's Spectrum Use Report on the band concludes that "[with] the need for better coordination efforts between all levels of government, increased emphasis on homeland and border security protection, and a more effective and efficient response and recovery, Federal agencies will continue to operate, for the foreseeable future, land mobile communication systems in this band that are used in coordination and cooperation with State and local partners."[7] In short, incumbent services in the 460-470 MHz are integral to enhancing public safety and homeland security.

By elevating the status of satellite services in the band to primary, the incumbent fixed and mobile services lose the overarching protection that satellite services sharing the band shall not cause harmful interference to stations operating in accordance with the Table of Allocations. In the earlier version of its proposal, NTIA proposed to remedy this by adding new footnote 5.A103 to make clear that "[t]he incumbent fixed and mobile allocations maintain a higher regulatory status over the primary meteorological-satellite (space-to-Earth) and earth exploration-satellite (space-to-Earth) services."[8] As previously submitted by NTIA, that footnote read:

> NTIA Proposed 5.A103 In the frequency band 460-470 MHz, earth stations in the meteorological-satellite (space-to-Earth) and earth-exploration-satellite (space-to-Earth) services shall not claim protection from, stations of the fixed and mobile services.

In its comments responding to the previously submitted NTIA proposal, MSI recommended that the language of Proposed 5.A103 be amended to further provide that satellite stations shall not cause interference to stations of the fixed and mobile services. In its latest version of its draft

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5 Comments of Motorola Solutions, Inc. IB Docket No. 16-185 (April 10, 2018).

6 Federal Government Spectrum Use Reports 225 MHz – 7.125 GHz, 460-470 MHz, *available at* https://www.ntia.doc.gov/files/ntia/publications/compendium/0460.00-0470.00_01DEC15.pdf.

7 *Id.*

8 NTIA/AA Coord. Letter at 6.

proposal, NTIA drops Proposed 5.A103 and removes any reference to incumbent fixed and mobile allocations maintaining a higher regulatory status over the primary meteorological-satellite (space-to-Earth) and earth exploration-satellite (space-to-Earth) services. Under this proposal, new satellite earth stations could request protection from the millions of fixed and mobile transmitters already operating in the band.

Past experience with spectrum sharing between high-powered terrestrial services and satellite receivers has demonstrated that interference is likely. In this particular scenario, the 460-470 MHz band is home to fixed base station receivers that will be susceptible to receiving downlink interference from satellites. Interference that disrupts base station receivers has a multiplying effect as it affects all subscriber devices utilizing that base station. If and when such interference is manifested, it will have broad impact on public safety, critical infrastructure industries, and all, industrial and commercial users in the band. The criticality of these communications dictates that full protection for this vital spectrum asset be maintained. This can be accomplished by either rejecting the NTIA's recommended proposal or reinstating the previously proposed footnote, including MSI's recommended edits.

Respectfully Submitted,

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